

REMARKS

In view of the following remarks, reconsideration of the rejections contained in the Office Action of May 21, 2003, is respectfully requested.

The Examiner has rejected claims 41-80 as being unpatentable over the Applicants' Admitted Prior Art ("AAPA") shown in Figure 8. However, these rejections are respectfully traversed. For the reasons discussed below, it is submitted that claims 41-80 are clearly patentable over the prior art of record.

Claims 41-80, including independent claims 41, 56, 57, and 72, are presently pending in this application. As previously explained in the Amendment filed February 28, 2003, independent method claims 41 and 56 recite that a gas is introduced into an interior of a vacuum chamber through a hole in a *dielectric* tube. In addition, independent apparatus claims 57 and 72 recite that a plasma processing apparatus comprises a *dielectric* tube having a gas supply hole formed therethrough which allows gas supplied to the vacuum chamber by a gas supply device to enter the vacuum chamber.

One embodiment of the present invention as recited in pending claims 41-80 is shown in Figure 1 and described on pages 11-13 of the substitute specification. In this regard, reference to any particular embodiment disclosed in this application is provided only for the Examiner's benefit, and is not intended to otherwise limit the scope of the claims to any one particular embodiment.

As explained in paragraph [0067] spanning pages 11 and 12 of the substitute specification, gas is introduced into a vacuum chamber 1 through a gas supply hole 18 formed in a *dielectric* bushing 17 (which is one example of a dielectric tube). A detailed view of the gas supply hole and dielectric bushing 17 of this particular embodiment is shown in Figure 2. Specifically, the dielectric bushing 17 is arranged within a metal ring 16 which forms a part of the sidewall of the vacuum chamber 1. As explained in paragraph [0070] on page 13 of the substitute specification, forming the gas supply hole 18 through a dielectric bushing 17 will help weaken high-frequency electric fields at the outlet of the gas supply hole 18. As a result, suppression of undesirable hollow cathode discharge can be suppressed.

The AAPA of Figure 8 illustrates a plasma processing method and apparatus, in which gas is introduced into a vacuum chamber 1 through a gas supply hole 25. The Examiner asserts that the gas supply hole 25 is formed within a dielectric tube attached to a metal body fixed to the vacuum chamber, but does not provide any specific support for this assertion. In fact, there does not appear to be any basis for this assertion. In contrast to the Examiner's position, Figure 8 illustrates that the gas supply hole 25 is formed directly through a *metal ring* 16, and does not disclose that a gas supply hole is formed within a *dielectric tube* (see paragraph [0003] of the substitute specification).

It would be clear to one of ordinary skill in the art that a metal ring is not a "dielectric tube" as recited in claims 41-80, and Figure 8 and the associated description in the specification clearly disclose that the gas supply hole is formed in a metal ring. Thus, the Examiner's basis for the assertion that Figure 8 discloses a hole formed in a dielectric tube is unclear. Nonetheless, as explained above, it is submitted that the AAPA clearly does not disclose or even suggest the formation of a gas supply hole through a dielectric tube as recited in each of claims 41-80. Accordingly, it is respectfully submitted that claims 41-80 are clearly patentable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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